

SECOND REVIEW OF NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS

**Western Rock Products
Nichols Pit**

**M0210039
March 23, 2007**

R647-4-105 - Maps, Drawings & Photographs

105.1 Topographic base map, boundaries, pre-act disturbance

The permit boundary is not shown on all your maps. The only map that shows disturbance boundaries is the Disturbed Area Map, #1. On Map #1 there is a historic disturbance boundary, there is a present disturbance boundary, and there is a 5-year plan boundary. Please include these boundaries on Site Map #1, Facilities Map #2, and final grading plan map #3. All maps must have legends and descriptions. In these legends you should provide acreages associated with your boundary labels, so it's clear what you are mining and disturbing and what you are bonding. Therefore, if your 5 year plan boundary is your proposed bonded area, you need to identify this on your map and show what the acreage is. (TM)

Please also show product piles, soil piles, waste dumps, and crusher fines storage areas and label them as such. There is a label on Map # 2 and it states "fines to be disturbed during reclamation" but this area is outside your permitted, disturbed area and property boundary. Please clarify what this means. (TM)

Please identify (show and label) the proposed route(s) of access from the nearest publicly maintained highway to the mining operations facility. (BE)

Please provide explanation per 105.1 (b) which refers to N/A. Crusher equipment has been identified on "Facilities Map #2", Crusher equipment is considered a surface facility and should be identified on the base map. Must clarify conflicting information. (BE)

Please identify the black bold-solid lines on the map titled, "Disturbed Areas #1". The legend indicates the black bold-solid line as reference to the 5-year plan, but there is an identical black bold-solid that remains unidentified. It is assumed it is the property boundary. Clarification and distinction must be provided. (BE)

105.2 Surface facilities map

The surface facility map titled, "Facilities Map #2" identifies existing crusher equipment to be removed, however, if applicable, the following shall be provided: proposed surface facilities (i.e. buildings, mining/processing equipment, roads, utilities, power lines,

proposed drainage control structures, location of topsoil storage areas, tailings or processed waste facilities, disposal areas for overburden, solid and liquid wastes and wastewater discharge treatment and containment facilities). If there are no proposed surface facilities, an explanation providing the non-applicability must be submitted. (BE) Please provide some text to address this comment as the crusher may be the only surface facility shown on Map 4.

105.3 Additional Maps

A reclamation treatments map should be furnished. This map should show areas of the site to receive various reclamation treatments shaded, crosshatched, or color-coded to identify which reclamation treatments will be applied. Reclamation treatments may include ripping, regrading, replacing soil, mulching, broadcast seeding, drill seeding and hydroseeding. (TM)

A reclamation map should be provided that shows information such as (but not limited to): berms, barriers, drainages, slopes, highwalls, roads, structures and equipment. (BE)

The map identified in the NOI, as "Attached Map" and Attachment B, but was not included. Please provide. This map shall include a border outlining the area to be reclaimed after mining, the number of acres disturbed, and the number of acres proposed for reclamation. The areas that are requested as part of a variance must be included. (BE)

Please provide explanation per 105.3 (d) that has a reference of N/A. An explanation and identification on a map must be provided regarding highwalls and slopes. (BE)

Please provide an operations map that identifies the following: entrance road, locked gate location, berm location, location of trash and scrap metal for hauling, haul road from the trash and scrap metal site to highway, identify materials storage location(s). Please include stock pile areas, property boundary, 5-year plan boundary and other map basics. (BE)

R647-4-106 - Operation Plan

106.2 Type of operations conducted, mining method, processing etc.

The plan proposes to work with DOGM near the end of mining operation to review final reclamation. In order to calculate a surety for this application, a reclamation plan needs to be written for the plan as submitted. If a 5-year plan is submitted the reclamation plan should be for the area mined in that 5-year period. See R647-4-110 - Reclamation Plan (TM)

All materials not used in the operation are to be stored for future reclamation. Please show on the surface facilities map where this material will be stored. (TM)

Please provide a narrative description regarding the location of the crushing and screening facility. Show these on the operations map. (BE)

106.3 Estimated acreages disturbed, reclaimed, annually.

This is not clear on the maps and needs to be accurately shown and labeled to reflect the plan. (TM)

Please provide a narrative description regarding the details ore/product stockpiles. The map titled, "Facilites Map #2" identifies three stockpiles. Please quantity each one and label them 1, 2, 3. Show access routes to the stockpiles. (BE)

Access/Haul Road are identified as 1.7 miles, but is not identified on any of the submitted maps. Please provide on Map #1, Map #2, Operations Map. (BE)

Please provide a narrative description regarding the plan for placement of the crusher fines. Please quantify the area that is identified in the 5-year plan. The area shown within the 5-year boundary on the map titled, "Facilites Map #2", does not appear to accommodate the annual volume. Also identify this fines acreage within the 5-year plan boundary on the operations map. (BE)

106.4 Nature of materials mined, waste and estimated tonnages

This portion of the application indicates that there is 15 acres of mining and an area where crusher fines are stored. The area where the crusher fines are located needs to be shown on the operations map. All areas affected by this operation need to be included in the application. (TM)

The plan indicates that 100,000 cu yds of tailings or reject material will be created annually. For the duration of the first five-year plan (or however many years you propose), the area to be impacted by this material will be much greater than the area presently shown. The permittee should allow for sufficient area to store this material and include in the plan the final disposition of this stockpile. (TM)

106.6 Plan for protecting & redepositing soils

The plan identifies an estimated 200,000 cu. yds. of substitute soil material available and that it will be respread at a 12- inch depth. With the 81.7 acres of disturbance, this amount of material will provide a 18- inch cover. The soil analysis provided shows a very

low organic matter content. To remedy this problem, consider amending the material with 5 tons/acre of composted manure or biosolids. (LK)

106.7 Existing vegetation - species and amount

The plan refers to the soil survey for vegetation information. The site location for the potential vegetation community for the soil type is near Parowan, Utah (ca. 30 miles away). Aside from listing species that potentially exist on the soil types at the site, the soil survey does not provide the percent ground cover of living vegetation. As previously requested, please provide the results of a vegetation survey that, at a minimum, provides the percent vegetation ground cover and the species that exist of the plant communities adjacent to the site that are presumed to have existed before mining. (LK)

R647-4-107 - Operation Practices

- 107.1 Please identify the berm size and location on the operations map. (BE)
- 107.2 Please provide the location for storage location of suitable soil materials on the operations map. (BE)
- 107.3 Drainages to minimize damage. Please describe how storm water drainage and erosion will be controlled coming from offsite onto the long reclaimed slopes at the edges of the pit. (TM)
- 107.4 Deleterious material safely stored or removed
The plan states no deleterious material will be left on the site after crushing operations have ceased for the year. The plan needs to include detail on how these materials will be stored at the site during the crushing operation. (TM)
- 107.6 Please identify and provide narrative regarding the areas that will be disturbed but are not Routinely used keeping them safe and environmentally stable. (BE)

R647-4-110 - Reclamation Plan

- 110.2.1 Roads, highwalls, slopes, drainages, pits, etc., reclaimed
The plan is unclear on the details for final highwall configuration. The Division realizes that the remaining highwalls surrounding the pit floor will be left at 45 degrees meeting regulatory requirements. Cross sections show a straight 45-degree slope. Accommodations for off-site drainage draining into the pit will still need to be discussed. Please provide what kind of reclamation treatment the highwalls will receive like ripping, gouging, shaping, reestablishing micro-drainages and how they will be seeded etc. The

Division suggests an irregular final slope length and width to more closely blend with existing topography. (TM)

- 110.2 Comments indicate that no pit or pond will remain, however, a narrative must be submitted providing information about the methodology for reclamation of pits and ponds.(BE)
- 110.3 Provide a narrative description about any surface facilities to be left as part of the post mining land use. Surface facilities include roads, pads, ponds pits etc. (BE)
- 110.4 Revegetation planting program
Please provide a revegetation plan for the disturbed areas. If different treatments will be used on selected areas, then these areas (and treatments) need to be identified on a reclamation map. At a minimum, the revegetation plan needs to define topsoil (plant growth material) replacement, including depth(s) to be replaced (the 200,000 cu.yds. of material will provide approximately 18- inches of material); amendments to be added (as needed - based on current soil analysis of plant growth materials - based on the soil analysis provided please plan to amend the soil with 5 ton/acre of composted manure or biosolids to remedy the low organic matter content. Fertilizer recommendations are based on cropland needs, which is excessive for re-establishing the native vegetation. The need for commercial fertilizer to establish the native vegetation is unlikely); seedbed preparation (ripping to the 24- inch depth is acceptable and leaving area rough for water collection), a list of species to be seeded, including rate of application as lbs/acre of pure live seed; timing - late fall is generally best time for seeding; and weed control measures (if needed). Species selection for revegetation should based on their need/utility for the post mining land use. When possible, the use of native species is encouraged (refer to the attached seed mix as an example of what is needed). (LK)
- 110.6 Please submit a statement indicating that reclamation will be conducted according to rules. (BE)

R647-4-111 - Reclamation Practices

- 111.2 Reclamation of natural channels
It appears from your final Grading plan that several ephemeral drainages will drain into the pit area. Please explain the way these drainages will be reclaimed and allowed to cascade down the remaining highwalls during severe thunderstorms. Will any protection be implemented to prevent unraveling of the highwalls in these areas under severe runoff events? (TM)

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- 111.3 Provide sediment control plan, which includes site characteristics (i.e. acreage, drainage patterns, rainfall data). Identify the erosion control plan and how it fits with the construction phases of reclamation. (BE)
- 111.4 Describe deleterious material plan. Including but not limited to handling the materials and their control. Identify a temporary landfill area if one is to be designated. (BE)
- 111.6 Reclamation map should identify slopes and regrading associated with waste piles, and spoil piles. Provide a regrading plan that incorporates soil characteristics. Include information about slope shape. Identify equipment to be used. (BE)
- 111.7 Describe how highwalls will be reclaimed and stabilized. Show location of highwalls on reclamation map. (BE)
- 111.8 Show on reclamation map all roads and pads that will be reclaimed. Provide narrative on how they will be reclaimed including proposed equipment to be used.(BE)
- 111.9 Show on reclamation map any dams and impoundments. Provide narrative regarding reclamation plan and stabilization. (BE)
- 111.10 Describe how trenches and pits will be reclaimed and estimate volume of these areas. (BE)
- 111.11 The map titled, "Facilities Map #2" shows crusher equipment to be removed. Provide narrative plan regarding its removal. (BE)
- 111.12 Topsoil redistribution
Refer to comments made under R647-4-106.6 and 110.5(LK)

R647-4-113 – Surety

A surety calculation for this plan needs to be included in the reply to this review. (TM)

Provide demolition activities and describe labor, materials and equipments cost. (BE)

Provide information about equipment used in reclamation. (BE)

Provide narrative about roadway lengths and method used for reclamation. Include type of equipment and labor. (BE)

Provide a mobilization/demobilization cost for all equipment to be used during reclamation. (BE)

Estimates about scope of work including labor, materials, and equipment costs. (BE)

If there are any landfill costs, identify them and estimated quantity. (BE)

Provide information about land grading including areas to be graded. (BE)

Any material re-location, provide estimated quantity and distance traveled. (BE)

More information may be required once the reclamation map and information is received. (BE)

R647-4-116 - Public Notice & Appeals

Attachment: Seedmix

Revegetation Species List

<u>Common Name</u>	<u>Species Name</u>	<u>*Rate lbs/ac (PLS)</u>
Intermediate wheatgrass	<u><i>Agropyron intermedium</i></u>	1.0
Thickspike wheatgrass	<u><i>Agropyron trachycaulum</i></u>	2.0
Bluebunch wheatgrass	<u><i>Agropyron spicatum</i></u>	2.0
Indian ricegrass	<u><i>Oryzopsis hymenoides</i></u>	2.0
Sandberg bluegrass	<u><i>Poa Secunda</i></u>	0.2
Palmer penstemon	<u><i>Penstemon palmeri</i></u>	0.5
Small burnet	<u><i>Sanguisorba minor</i></u>	1.0
Black sagebrush	<u><i>Artemisia nova</i></u>	0.2
Wyoming big sagebrush	<u><i>Artemisia tridentata wyomingensis</i></u>	0.1
Bitterbrush	<u><i>Purshia tridentata</i></u>	1.0
Bitterbrush	<u><i>Purshia tridentata</i></u>	1.0
Forage kochia	<u><i>Kochia prostrata</i></u>	0.5

Total		10.5 lbs/ac

*Recommended broadcast seeding rate.